



NOTES ON THE BOTANY OF THE INTERIOR OF
NEW SOUTH WALES.

BY R. H. CAMBAGE, L.S.

PART III.

(Plate xii.)

The following notes refer to the country extending from Mudall Station, on the Bogan River, to Euabalong, on the Lachlan :—

Soon after leaving the river some of the West Bogan scrub clearing is noticed, and it is found that most of the White or Cypress Pine, *Callitris robusta*, has been destroyed by ring-barking. It seems very doubtful whether this is a wise action, as there is apparently no timber left to adequately take its place. The result of several years of enquiry has led me to believe that if a vote were taken throughout the western district as to which is the most all round useful timber there, the verdict would be in favour of Cypress Pine; though at the same time there are settlers who destroy it for fear of scrubs being formed by the seedlings. Unfortunately it covers large tracts of country between the Bogan and the Lachlan, much to the injury of the sheep-breeder, for not only does it prevent the growth of grasses, but affords shelter for vermin. Still it does not by any means become a nuisance everywhere it grows, and it is questionable whether in some instances it would not be better to give up certain areas solely to the Pine for the sake of the timber, as these areas are often almost useless for sheep. There is one quality which this tree has to commend it, and that is, it does not throw out suckers no matter at what stage it is cut down or ring-barked, so that it is only in respect of quantity from seedlings that it is considered a nuisance. It extends over a very large area, preferring the dry soil and avoiding the damp river flats. It comes eastward till it reaches

an elevation of about 1,500 feet above sea level, when it ceases, though it is seldom plentiful above 1,200 feet. The timber is used freely for fence posts and all kinds of buildings. It seems to resist the white ants better than the Box timbers; but Mr. Coles, of Gilgunnia, informs me that if a tree be ring-barked and allowed to stand till dead, it is soon attacked if then cut down and used; but if cut down green and allowed to season while in a horizontal position, it offers much more resistance. The theory advanced for this is, that the incisions made by ringbarking afford a ready escape for the product which is required to keep away the white ants, and the downflow is assisted by the vertical position of the trees. I give these particulars, as any information on the subject is useful; and if the treatment should be found reliable it might possibly be of service in connection with the attacks of the Teredo on the coast Turpentine, *Syncarpia laurifolia*. As a firewood White Pine is not prized, because it burns so rapidly. When first lighted it shows some similarity to Budtha, *Eremophila Mitchelli*, as both burn with considerable splutter, and both are objectionable because they cover everything with soot that comes within range of the fire. In other respects the trees are quite dissimilar. It might be mentioned that there is scarcely any western tree which does not make good burning wood, but perhaps the favourites for cleanliness and slow burning are Myall and Yarran; while north of Cobar, where Myall does not grow, *Acacia excelsa* (Ironwood) is considered one of the best in these respects.

Between Mudall and Pangee Homesteads the following trees and shrubs were noticed:—*Geijera parviflora* (Wilga), *Pimelia microcephala*, *Eremophila maculata* (Wild Fuchsia), *E. Mitchelli* (Budtha), *Sterculia diversifolia* (Currajong), *Casuarina Cambagei* (Belah), *Pittosporum phillyræoides*, *Myoporum deserti* (Dogwood), *Hakea leucoptera* (Needlewood), *Dodonaea* sp. (Hopbush), *Canthium oleifolium*, *Heterodendron oleaefolium* (Rosewood), *Apophyllum anomalum* (Currant or Emubush), *Fusanus acuminatus* (Quandong), *Callitris robusta*, *Capparis Mitchelli* (Wild Orange), *Exocarpus aphylla*.

Flindersia maculosa (Leopard Tree) and *Atalaya hemiglauca* (Whitewood) are to be seen near Mullengudgery, on the railway line, to the north of Mudall, which seems about their southern limit, though they may possibly extend down the Darling River.

The Acacias are represented by *A. Oswaldi* (Miljee or Dead Finish), *A. dealbata* (green variety), and *A. homalophylla* (Yarran). Just at starting, and near the river, *A. pendula* (Myall or Boree) is fairly plentiful, and has been more so; but in travelling from this point to the Lachlan viâ Nymagee, it is not seen again until that river is reached, a distance by road of about 150 miles. To a Bogan River man the knowledge of this fact would at once convey the impression, which is correct, that the country lying between the Bogan and Lachlan Rivers along this route is not made up of river plains, but is inclined to be scrubby, hilly and dry. The country lying to the west of this road is of the same nature, with no natural water conservation. Before the days of squatters and Government tanks, and in times of drought I do not think any water could have been obtained between Bourke and Condobolin viâ Cobar and Nymagee, except immediately after a thunderstorm. The aborigines were assisted in their journeys across this class of country by obtaining water from the lateral roots of the Mallees, as mentioned by previous writers. The species from which the chief supply was obtained is the Red Mallee, *Eucalyptus oleosa*. In South Australia this tree is sometimes called Water Mallee because the roots yield a considerable quantity of water. These roots were cut into lengths, and stood on end; the water would then at once begin to drip out in exactly the same way as it does from the large vines known as Supple Jack, which are found in the coast brushes. For the information of those who have not had any experience in drinking from these vines, it may be mentioned that after selecting one about three inches in diameter it is not sufficient to simply cut it in one place, as then only a little moisture would appear, but it is necessary to make an incision above, or better still, to cut a length of two or three feet right out. A bushman holds this up and allows the water to flow straight into his mouth, so as to

avoid noticing the woody taste which is in evidence if the water is collected in a vessel and allowed to stand.

Mr. Surveyor E. A. Harris informs me that in the dry country back from the Murray River the wild pigs break up the roots of the Mallee, which are apparently their chief water supply.

At about 20 miles north of Mudall, and a few miles south of Nyngan, is a clump of *Acacia harpophylla* (Brigalow), noticed in 1892.

The Eucalypts noticed were *E. largiflorens*, *E. populifolia* (Bimble Box), *E. intertexta*, *E. Woollsiana*, *E. dumosa*, *E. oleosa*, and *E. rostrata* (River Red Gum).

E. largiflorens was seen near the Bogan, and not again until the Lachlan was reached.

E. rostrata was not seen after leaving the Bogan, till it was found on a creek at Pangee Homestead.

From Pangee to Nymagee, a distance of about 28 miles westerly, there are:—*Callitris robusta*, *Exocarpus aphylla*, *Apophyllum anomalum*, *Eremophila Mitchelli*, *E. longifolia* (Emubush), *Hakea leucoptera*, *Helichrysum Cunninghamii*, *Geijera parviflora*, *Heterodendron oleæfolium*, *Capparis Mitchelli*, *Myoporum deserti*, *Canthium oleifolium*, *Cassia eremophila*, *Fusanus acuminatus*, *Celastrus Cunninghamii* (a shrub with small pink fruits and bitter leaves), *Bossicea* sp. (without flowers), *Sterculia diversifolia*, *Beyeria villosa*, and *Casuarina Cambagei*.

Heterodendron oleæfolium is known here and to the eastward, towards Dubbo, both as Rosewood and Whitewood, the confusion having probably arisen in the following manner:—North of Nyngan and around Bourke the tree known as Whitewood is *Atalaya hemiglauca*; and the wood, which is not extremely hard for a western timber, is white right through. It is seldom to be found to the south of Nyngan, but the other tree, *Heterodendron oleæfolium*, is, and in young trees the wood is all white, while the bark somewhat resembles that of *Atalaya hemiglauca*, which partly accounts for the confusion. In mature trees of *Heterodendron oleæfolium*, which reach a height of 40 feet, with a diameter up to 2 feet, the centre wood turns red, which suggests the name

of Rosewood, and it is exceedingly hard, though not tough. Near Nymagee I have known large trees of it called Ironwood, owing to the hardness of the wood. Through having white wood when young and red wood when mature, is another and probably the chief reason why the tree has the two names of Whitewood and Rosewood, for I found that on some holdings they are considered two species. On the Lachlan and about Trangie, on the western railway line, are places where it seems to attain its greatest size. The leaves are much in request for fodder, and if the branches be lopped, young shoots will grow freely, giving the tree a very pretty appearance, although generally it is by no means an umbrageous species. Between Bourke and Cobar it is seldom much more than a shrub, with pale glaucous leaves, and is one of the plants known as Blue Bush, though on Gundabooka Station I have heard it called Rose Bush as well. The species extends at least as far south as the Murrumbidgee, generally growing on good soil and avoiding rocky situations. Its aboriginal name on the Lachlan is Beernan, and towards the Bogan it is Ruba.

The Acacias noticed between Pangee and Nymagee were:—*A. homalophylla*, *A. Oswaldi*, *A. hakeoides*, *A. decora*, *A. doratoxylon* (Currawong), *A. colletioides* (Pin Bush), *A. Burkittii*, and *A. amblygona*, *A. Cunn.*, a dwarf prickly species growing near Nymagee.

The Eucalypts seen were:—*E. rostrata*, only close to Pangee, *E. populifolia*, *E. Woollsiana*, *E. intertexta*, *E. oleosa*, *E. dumosa*, *E. viridis*, *E. sideroxylon*, *E. tereticornis*, var. *dealbata*, and one tree of Ironbark Box found on a slate ridge among *E. sideroxylon* and *E. Woollsiana*. The Ironbark Box is the tree which has the appearance of being a hybrid between *E. sideroxylon* the Ironbark, and *E. Woollsiana*, the Box. Just north of Nymagee is a hill of considerable geological interest, one side being Silurian slate, and the other a porphyry and granitic rock. On the slate side is *Eucalyptus Morrisii*, a mallee 8 or 10 feet high, but it is seldom found on the other side, where instead there is *E. tereticornis*, var. *dealbata*. All through I have noticed that the former

prefers a sedimentary formation, and the latter is strongly represented on an igneous, though they are not absolutely restricted to either. I have never seen *E. Morrisii* growing east of a line joining Girilambone, Nymagee, and Euabalong.

A few trees of *Acacia implexa*, Benth., (Hickory) were found on the top of the igneous hill. This is the most north-westerly locality in which I have found this species. It was next seen at a point about 80 miles south-easterly from Nymagee, towards Trundle, and here again it was on the top of a hill composed of igneous rock, a very fine granite, there being not more than half-a-dozen trees. The question suggested by the position of these isolated representatives of a species which is known to extend southerly through New South Wales and Victoria, is whether these trees have once been more plentiful in the north-west and have been reduced by geological and climatic agencies, or whether they are only now finding their way out in that direction. Judging from the surroundings I incline to the former suggestion, but the solution of the question seems full of interest to both botanists and geologists.

Casuarina quadrivalvis (Mountain or She Oak), with cones $2\frac{1}{8}$ inches long, was also noticed on the igneous hills. Also *Exocarpus cupressiformis*, Labill., (Native Cherry), and now seen for the first time in coming from Bourke. Other trees growing around were *Eucalyptus sideroxylon* and *Acacia doratoxylon*. *Tecoma australis* (Bignonia) was found still flowering early in June. The aboriginal name for this climber is Geewong.

From Nymagee to Wirlong Copper Mine is about 15 miles south-westerly, and near the road the following trees and shrubs were noticed:—*Callitris robusta*, *Hakea leucoptera*, *Heterodendron oleacefolium*, *Apophyllum anomalum*, *Capparis Mitchelli*, *Geijera parviflora*, *Cassia eremophila*, *Dodonaea* sp., *Bertya Cunninghamii* (Broom Bush), *Fusanus acuminatus*, *Sterculia diversifolia*, *Eremophila Mitchelli*, *E. longifolia*, and *Eriostemon difformis*, A. Cunn., a shrub with short leaves and pretty white terminal flowers. Only a few flowers were found in June, but the plant is in full bloom in August and September, and is then a most

attractive little shrub. After passing the six-mile gate there were *Pittosporum phillyræoides*, *Exocarpus aphylla*, *Casuarina quadrivalvis*, *Melaleuca uncinata*, R.Br., (Tea Tree), *Canthium oleifolium* (at the 12-mile tank), *Casuarina Cambagei*, *Bossiaea* sp., *Triodia irritans*, R.Br., (Spinifex), and *Myoporum deserti*.

The Acacias included *A. Oswaldi*, *A. hakeoides*, *A. homalophylla*, *A. Burkittii*, *A. decora*, *A. calamifolia*, Sweet, *A. doratoxylon*, *A. aneura* (Mulga), and a very little of a plant like *A. undulifolia*, Frazer, but as neither flowers nor pods were found it is impossible to speak with certainty.

A few trees of what is probably *A. rigens*, A. Cunn., were seen, but as only very young flowers were obtained the identification is not certain.

One tree of *Acacia aneura* was seen soon after leaving Nymagee, and half a dozen more at about 11 miles, so that the species is not very well represented in this locality.

A. calamifolia grows about here with one stem for only a few inches, then spreads into half a dozen with fairly smooth grey bark. Height up to 12 or 15 feet, and quite as broad across the top. The leaves are needle-shaped with slightly curved points. On first catching sight of the trees it is noticed that small bushes have much the appearance of *A. Burkittii*, but the latter always assumes more of a shrub-form with thin stems, growing in patches, and its appearance would suggest the name of Broom Bush.

The Eucalypts seen were *E. populifolia*, *E. intertexta*, *E. oleosa*, *E. dumosa*, *E. viridis*, *E. sideroxylon*, *E. Morrisii*, *E. tereticornis*, var. *dealbata*, *E. Woollsiana*, and *E. uncinata*. *E. sideroxylon* had not ceased flowering in the Nymagee district early in June. Around Nymagee *E. intertexta* is burnt considerably for charcoal, and seems to be the chief tree used for that purpose. It is known by some as Gum, and by others as Yellow Box.

Soon after passing the 12-mile tank a small patch of very narrow-leaved mallee was noticed, which upon investigation proved to be *Eucalyptus uncinata*, Turcz. The fruits were unusually small, but, together with the flowers, are otherwise identical with

specimens recently collected in South Australia, and kindly identified for me by Mr. J. G. Luehmann, F.L.S., Curator of the National Herbarium, Melbourne. In a previous paper (Part i.) it was mentioned that only four species of mallee were noticed between Bourke and Condobolin, but the identification of *E. uncinata* makes five. The species probably extends to the south-west from the point where it has been found. It has not previously been recorded so far east in New South Wales, and appears to have been known to exist chiefly in the south-west corner of the State.

Owing to their narrow leaves, *E. uncinata* and *E. viridis* might easily be confused in the distance, but a comparison of fruits or flowers enables the observer to readily separate them. The fruits of the former are somewhat like those of *E. oleosa* on a small scale, and both have the peculiarity of holding part of the style in position long after the rest of the flower has fallen. The top of the style is eventually broken off; the split base still remaining is then seen as three or four protruding valves. But these two species would rarely be confused when seen growing, owing to the great difference in the size of their leaves, those of *E. oleosa* being large beside those of *E. uncinata*. In most Eucalypts the stamens stand out fairly straight when the flower is fully developed, but a characteristic of *E. uncinata* is that the filaments are slender, and seem too weak to straighten out, the alternative being that to a great extent they retain the angles which are formed before the anthers are released from the calyx.

The Wirlong Copper Mine is situated among some hills made up of slate and crushed porphyry, and growing around are *Casuarina quadrivalvis*, *Helichrysum Cunninghamii*, *Phebalium glandulosum*, *Eremophila latifolia*, *Eriostemon difformis*, *Cryptandra amara*, Sm., *Tecoma australis* with narrow leaves, *Beyeria viscosa*, *Eucalyptus sideroxylon*, *E. viridis*, *E. Morrisii*, and *E. tereticornis*, var. *dealbata*. This last-named tree grows here sometimes in mallee form, spreading out from one root into 8 or 10 thin stems.

An interesting shrub was found on the top of the highest hill to the north of the mine, and appears to be a variety of *Correa speciosa*, Andr. It bears whitish-green flowers half an inch long, each having four connate petals, giving the flower a tubular form. The eight stamens are arranged so that there is one extending along the centre of each petal, and one at each angle formed by their adhering edges, the internal appearance of the flower resembling a partially opened umbrella. This plant was never seen by me in any other part of the western district, though probably it is to be found there.

South of the mine, and along the south boundary of portion M.L.4, parish Jamieson, is an *Acacia* growing as little trees 8 or 10 feet high, with narrow viscid leaves. No pods were to be seen, and the flowers, which were only just forming in June, appeared in their young state as almost sessile globular heads arranged in pairs. The plant was not met with again, and the incomplete specimens have not been identified.

Acacia amblygona was found on a hill to the south, and *A. excelsa* to the south-west.

From the Wirlong Copper Mine to Gilgunnia is about 20 miles in a general southerly direction, the formation consisting of alternate slate and porphyry hills, and lowland made up from the denudation of those elevations. The following trees and shrubs were noticed :—*Pittosporum phillyræoides*, *Fusanus acuminatus*, *Casuarina Cambagei*, *C. quadrivalvis* (on a sandy ridge), *Callitris robusta*, *Geijera parviflora*, *Eremophila Mitchelli*, *E. longifolia*, *E. latifolia*, *Melaleuca* sp. (without flowers), *Eriostemon difformis*, *Apophyllum anomalum*, *Capparis Mitchelli*, *Hakea leucoptera*, *Heterodendron oleaefolium* (with rather pale leaves), *Exocarpus aphylla*, *Dodonæa viscosa*, var. *attenuata*, *Bertya Cunninghamii*, *Templetonia* sp. (without flowers), and *Sterculia diversifolia*.

The Belah hereabouts has green branchlets, and not that pale appearance commonly seen between Bourke and Cobar.

In this and many other places in the west there is a vine, *Lyonsia eucalyptifolia*, which almost covers some of the large

trees, and in time kills them. I do not at present know whether this species produces yams like *Parsonsia Paddisoni*, Baker.

The Acacias seen were :—*A. dealbata* (green variety), *A. homalophylla*, *A. hakeoides*, *A. doratoxylon*, *A. Burkittii*, a few trees of *A. aneura*, *A. decora* (growing on the porphyry formation), *A. rigens* (?), and *A. Oswaldi* (locally known as Middy). At Dandaloo, on the Bogan, an aboriginal name for this tree is Currawawidgee. All through this district the Yarran is covered with a mistletoe, *Loranthus pendulus*, Sieb.

The Eucalypts noted were :—*E. Woollsiana*, *E. sideroxylon*, *E. tereticornis*, var. *dealbata*, *E. Morrisii*, *E. viridis*, *E. populifolia*, *E. oleosa*, *E. intertexta*, *E. dumosa*, and *E. rostrata*.

In travelling southerly and easterly from Gilgunnia *E. Morrisii* was never seen again.

The Ironbark (*E. sideroxylon*) continues as usual in the far west to be of rather crooked growth, and it is seldom possible to get more than one log from a single tree.

The only trees seen of the River Red Gum (*E. rostrata*) were along the banks of Sandy Creek, near a Government tank. The composition of the bed of this watercourse gives evidence that the stream takes its rise in hills of granite somewhere away to the westward. The fact of a Government tank being constructed within half a mile of this creek, and in no way connected with it for supply, demonstrates the fact that for the greater part of the year it is a creek without water, like most of the western watercourses. Early in May of 1899 I reached this spot one evening with thirsty horses only to find both creek and tank dry, which goes to prove that a Government tank is not always a guarantee of water, though as a matter of fact it generally is. On examining the River Gums it was found that although the leaves and mature fruits were typical, the buds showed a different operculum to the usual form, for instead of being pointed and pinched in the middle they tapered away evenly from the base to a rather blunt ending, and were shorter than usual, having much the appearance of some forms of *E. tereticornis*, var. *dealbata*. Though I under-

stand that this form is not actually rare, still I have only collected it on creeks, and have never noticed it on the trees growing near large rivers.

In travelling through this part of the country, it is not long before anyone interested in botany learns that the hills of sedimentary formation are much more prolific in botanical specimens than are those composed of igneous rocks.

Near Back Berdouba Station, about 6 miles north of Gilgunnia, is a hill apparently of porphyry rising a few hundred feet above the surrounding levels, and known as North Peak. The Eucalypts on it are confined to *E. populifolia* and *E. tereticornis*, var. *dealbata*, chiefly the latter, some of it growing as trees and some spreading as mallees. *Casuarina quadrivalvis* is also found near the top, with *Acacia doratoxylon*, *Sterculia diversifolia*, and *Canthium oleifolium*; while climbing over them is *Tecoma australis*. Just at the base of the hill there are *Callitris robusta* and *Acacia decora*. All the above, with the exception of *Canthium oleifolium*, may be expected on any porphyry hill throughout the Gilgunnia district. Most of these hills are, therefore, fairly clear, and generally they present a rounded form in the distance.

From Gilgunnia to Double Peak is about 23 miles southerly, the formation being slate for 5 or 6 miles after which it is chiefly weathered porphyry. *Callitris robusta* is to be found all the way, other trees and shrubs met with being:—*Eremophila Mitchelli*, *E. longifolia*, *E. latifolia*, *Hakea leucoptera*, *Casuarina Cambagei*, *Cassia eremophila*, *Apophyllum anomalum*, *Heterodendron oleæfolium*, *Geijera parviflora*, *Dodonæa* sp., *Exocarpus aphylla*, *Sterculia diversifolia*, *Eriostemon difformis*, and *Olearia decurrens*, A. Cunn.

The Acacias were represented by *A. homalophylla*, a little of *A. aneura*, *A. Oswaldi*, *A. decora*, *A. calamifolia*, *A. doratoxylon*, and *A. Burkittii*. Some few miles after leaving Gilgunnia a few trees of *Acacia excelsa* were seen, and this is the most southern point at which I have ever found the species, though it may continue to the south-west.

The Eucalypts observed were *E. oleosa*, *E. dumosa*, *E. populifolia*, *E. intertexta*, *E. viridis*, and *E. tereticornis*, var. *dealbata*. The latter is sometimes here called Applewood.

Mount Hope is about 10 miles south of Double Peak, and the vegetation between these towns is much the same as that passed through coming from Gilgunnia.

From Mount Hope to Euabalong is about 44 miles south-easterly, and up till two years ago there was no water to be had on the road between these places, and the stage had to be made in one day. This gave one very little time to examine the intervening country, consequently my notes are not as complete as I could wish.

Some trees noted were *Callitris robusta*, *Eucalyptus populifolia*, *E. viridis*, *E. intertexta*, and *E. uncinata*; the last of these has been only recently identified from some specimens which I had put away. The fruits in this case are of normal size.

From about the 15- to the 21-mile posts there is a Mallee scrub consisting chiefly of *E. oleosa*, and *E. dumosa*, while here and there through the scrub are trees of *E. sideroxylon* and *E. intertexta*. At about half-way to Euabalong is a ridge of sandstone and conglomerate, probably Devonian, though no fossils were found. From the foot of this elevation the mallee extends for many miles growing among the sand accumulated from the wearing away of the surrounding hills.

Just after passing the sandstone hill there is now a tank, and growing near is a fair quantity of Mulga, *Acacia aneura*, some with fairly broad and some with very narrow leaves. I have not seen this species east or south of this point, so that probably its south-easterly limit is not far from here.

Acacia homalophylla, *A. hakeoides*, and *A. triptera*, Benth., were noticed at different points along the road.

Apophyllum anomalum, *Tecoma australis*, *Casuarina Cambagei*, *Cardamine hirsuta*, Linn., and *Triodia irritans* were also noted.

Among the Mallee about here there is often a spreading Pine, *Callitris verrucosa*, R.Br., which grows with a short stem and branches out almost from the ground. The fruits are larger than

those of *C. robusta*, and are covered with pimples or warts full of a resinous substance. South of the Lachlan this tree is sometimes called Turpentine.

On looking over my specimens I find that, at about 10 miles from Mount Hope, I collected a Mallee which so far has not been identified, and may possibly be undescribed. This makes six species of Mallee noticed along the road from Bourke to Condo-bolin. The leaves of this tree are narrow like those of *E. viridis*, or *E. uncinata*. The fruits are shaped somewhat similar to the large forms of *E. viridis*, but have the capsule deeply sunk. The buds have a short, nearly hemispherical operculum. I have collected the same species in the Ninety Mile Desert, South Australia, but in neither instance was I able to procure flowers.

Towards the Lachlan are some large trees of *Heterodendron oleæfolium*. Here *Eucalyptus largiflorens* is again found following the river country, also *E. rostrata*.

Another tree growing on the river flats is *Acacia salicina*, Lindl., (Cooba or Native Willow). It has a diameter up to two feet, and is a most useful timber, being in request for cabinet making and certain wheelwright's work. Cooba appears to be the aboriginal name for this tree, but there is a growing tendency in the west to pronounce the name Cuba. There are other cases of this change, notably in *A. homalophylla*, now called Yarran, but by the aborigines pronounced Yarreen; and again in *A. Cambagei*, Baker, which is by the aborigines pronounced Gidgea or Gidya, but very often now called Gidgee. *A. salicina* has a considerable range, but is generally associated with river country. Its most eastern locality recorded is the Page and Hunter Rivers, east of Scone. This particular district, east of the Dividing Range, is interesting in being the home of several western species (already recorded by Messrs. Maiden and Betcher); among others which may be seen from the road are *Acacia harpophylla*, (Brigalow); close to Scone, *A. homalophylla*, at Belltrees; *Heterodendron oleæfolium*, *Geijera parviflora*, and large trees of *Acacia salicina*, near the Page River. Probably a search through the hills would reveal several others. The rock here is

the same as that west of the range, which tends to show that the geological formation is an important factor in the distribution of species. Near here the Great Dividing Range, with its cold heights, has not formed the usual barrier between the eastern and western floras, for the Liverpool Range is lower than, for instance, the New England Range, the Blue Mountains, or the Monaro Range, the highest point on the railway line being only a little over 2000 feet, as against 3000 and 4000 feet on the other ranges. Therefore climatic conditions have probably also assisted in the spread of these species.

Growing close to the bank of the Lachlan, near Euabalong, is a tree with rough bark and long narrow leaves, and often known as River Cooba to distinguish it from *A. salicina*, with which it is seen to have affinities. It is *A. stenophylla*, and follows the banks of the Lachlan for many miles, hanging over the water among the Red Gums.

E. melliodora, A. Cunn., Yellow Box, is now seen for the first time. Out in the west this tree is generally found near the rivers, though in the Bathurst and Orange districts it is also growing on the hills; and even north-west of Parkes it extends on to the hills south of the Bogan, though it is not so plentiful. Along the river flats it is a handsome shade-tree with a pendulous habit, and after being lopped often grows with increased beauty. Evidence of this may be seen near Cootamundra, where for years the leaves of this species have been used for the production of a well known brand of eucalyptus oil. The bark of this tree is sometimes smooth and white, while in other cases the trunk is covered with a brown flaky bark, and often in old trees it is quite rough near the butt. I have looked for some botanical difference between the rough- and the smooth-barked forms, but have failed to find any. Nor does this feature seem to be regulated by climatic conditions, as both kinds are found on the banks of the Lachlan in a warm climate, and again on the cold hills around Orange.

E. melliodora gives a good timber, especially for posts, and where strength is required; but being heavy and somewhat

difficult to split, it is for these reasons often left alone. In general it is not a tall tree, considering the diameter of the trunk, which is often four or five feet. One constant feature of this species is that the sap is yellow, and this is always the bushman's test in cases of doubt, the investigation being effectedd by removing a piece of the bark. It is this yellow sap that gives rise to the names of Yellow Box and Yellow Jacket.

Its flowers are rich in honey, as might be supposed from its botanical name. It may not be generally known that in some of the cold parts near Bathurst it sometimes becomes necessary for the apiarist to travel his bees for flowers in much the same way as the squatter has to travel his sheep for grass, and partly because certain species of Eucalypts do not flower profusely every year, but generally miss a year, and sometimes more. In such cases a patch of flowering Yellow Box is sought, as this tree gives the best results to the bee farmer. Next to this the White Box, *E. albens*, is considered one of the best for honey.

E. melliodora has a wide distribution, but is much more plentiful west of the Great Dividing Range than east of it, growing on both igneous and sedimentary formations, though it is rare on the Triassic.

In the Campbelltown and Illawarra districts *E. Bosistoana*, F.v.M., is sometimes called Yellow Box, the local assumption in some cases being that it is a coast form of *E. melliodora*, but, as botanists know, the species is quite distinct. Generally where *E. Bosistoana* is called Yellow Box the name is suggested by the colour of the wood.

Between the Bogan and the Lachlan viâ Nymagee the total of the Eucalypts noted was—*E. populifolia*, *E. largiflorens*, *E. sideroxyton*, *E. Woollsiana*, *E. intertexta*, *E. melliodora*, *E. rostrata*, *E. tereticornis* var. *dealbata*, *E. Morrisii*, *E. oleosa*, *E. dumosa*, *E. viridis*, *E. uncinata*, a Mallee not identified, and one tree of Ironbark Box.

The Acacias were represented by *A. pendula*, *A. homalophylla*, *A. excelsa*, *A. aneura*, *A. doratoxyton*, *A. Oswaldi*, *A. hakeoides*,

A. decora, *A. dealbata* (green variety), *A. Burkittii*, *A. calamifolia*, *A. triptera*, *A. amblygona*, *A. salicina*, *A. stenophylla*, *A. colletioides*, *A. rigens* (?), *A. undulifolia* (?), and *A. sp.*

EXPLANATION OF PLATE.

Fig. 1.—*Pittosporum phillyræoides*, DC. (Berrigan), Nymagee, N.S.W.

Fig. 2.—*Eremophila longifolia*, F.v.M. (Emu Bush), Bourke, N.S.W.